FEMA

HAZUS-MH:

Information You Need for a Map-Based Disaster Exercise

How can emergency managers map the area of impact from storms, earthquakes or floods?

How can emergency managers determine the likelihood of damage to hospitals, police, fire and emergency operations centers from ground shaking and hurricane force winds?

How can emergency managers identify and quantify the population most at risk from damaging hurricanes, earthquakes and floods?

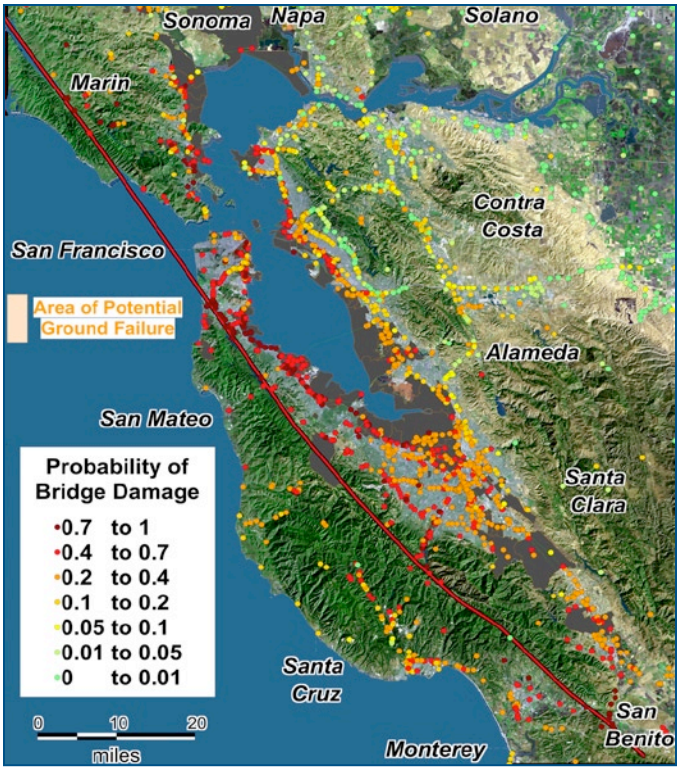
HAZUS-MH has the answers!

A disaster exercise provides emergency managers with an objective assessment of their capacity to prepare for, respond to and recover from a disaster. A key to a successful exercise is the ability to quantify and map the potential consequences from disasters, including scope of damages, exposed population, and loss of functionality to essential facilities. As a regional loss estimation tool, HAZUS-MH is uniquely suited for disaster exercise scenario development. For this reason, HAZUS-MH has been widely used since the early 1990's for functional planning, scenario development and exercise support.

Applications Using HAZUS-MH During a Disaster Exercise.

Professionals Using HAZUS-MH	Key HAZUS-MH User Roles	Disaster Exercise Applications
DPW, County Officials, Floodplain Managers, Building Code Officials, Tax Assessors	**Data Developer:** Collect and contribute data on the project area	Scenario driven exposure analysis
GIS Professionals and HAZUS-MH Software Users	**Data Manipulator:** Run HAZUS-MH and compile and use the data collected by the data developers	Demonstrate HAZUS-MH and GIS capabilities pre- and post-disaster
Engineers, Consultants, Floodplain Managers, Building Code Officials	**Data Interpreter:** Analyze the results of a HAZUS-MH run	Damage and losses from different scenarios
Risk Managers, Mitigation Planners, Political Leaders, Building Code Officials	**Decision Maker:** Use the results of a HAZUS-MH run to establish priorities for mitigation projects and response and recovery operations	Infrastructure resilience identified

Using HAZUS-MH during a disaster exercise enhances and develops Federal, state and local response and preparedness capabilities for earthquakes, floods and hurricanes.



HAZUS-MH Used to Support San Francisco Bay Area Earthquake Exercise

On November 17, 2006, California officials concluded a major statewide exercise, entitled "Golden Guardian '06 (GG06)", following 36 hours of play focusing on a catastrophic San Francisco Bay Area earthquake. HAZUS-MH was used to support the exercise, simulating a repeat of the 1906 San Francisco earthquake.

Four Corners Earthquake Exercise Uses HAZUS-MH

The Four Corners represents the area where Missouri, Kansas, Oklahoma, and Arkansas borders meet. The exercise in December 2007 focused on their shared susceptibility to the Nemaha Ridge Seismic Fault. AJ Lehmaen, Missouri's Exercise Officer, and Steve Besemer, Earthquake Program Manager, ran the exercise that allowed the four states to collaborate and solve emergency response issues. The HAZUS-MH maps and reports allowed each of the four states to identify issues unique to them. Using HAZUS-MH also enabled them to identify common areas of concern and to collaborate toward solving response challenges. HAZUS-MH highlighted potential issues with: mass care, damage assessment, emergency protective actions, and transportation route restoration.

HAZUS-MH Used to Create Hurricane "Alanzo" and Test South Carolina Preparedness

HAZUS-MH was used for a hurricane exercise in January 2008 at the Emergency Management Institute in Emmitsburg, Maryland. The FEMA Region IV HAZUS Technical Team produced a complete set of HAZUS-MH maps and reports for this exercise. The four-day, scenario-driven exercise was based on a hurricane named "Alanzo" which made landfall in Horry County, South Carolina.

HAZUS-MH enabled the exercise participants to evaluate post-landfall flooding levels and peak wind speeds. The HAZUS-MH Peak Gust Wind Speeds map was especially beneficial: it showed how the wind field greatly exceeded safe building design over broadly populated areas. HAZUS-MH made it clear that building to minimum code designs would not safely withstand the wind speeds estimated during this exercise. In addition, the HAZUS-MH maps showed degrees of structural damage to schools. This information allowed exercise participants to determine which schools to designate as shelters and which schools needed retrofitting.

Maximize your HAZUS-MH results by working in collaboration with other professionals.

Participate in a HAZUS User Group. HAZUS User Groups are partnerships between public and private sector organizations that collaborate on projects, combine resources and share information, data, and tips on using HAZUS-MH. Over twenty HAZUS User Groups operate throughout the United States. Find one in your area by visiting www.fema.gov/plan/prevent/hazus.

Use HAZUS-MH before the next disaster strikes!

Training is widely available at FEMA's Emergency Management Institute, on-line and in the regions.

HAZUS-MH is Free!

Order your copy from FEMA's Publication Warehouse (800) 480-2520 or visit www.fema.gov/plan/prevent/hazus to learn more.

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